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#### 1 The intermodulation and distortion due to quantization of sinusoids

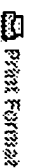
*Blachman, N.;*  
Acoustics, Speech, and Signal Processing [see also IEEE Transactions on Signal Processing], IEEE Transactions on , Volume: 33 , Issue: 6 , Dec 1985  
Pages: 1417 - 1426

[Abstract]    [PDF Full-Text (992 KB)]    IEEE JNL

#### 2 On discrete short-time Fourier analysis

*Cvetkovic, Z.;*  
Signal Processing, IEEE Transactions on [see also Acoustics, Speech, and Signal Processing, IEEE Transactions on] , Volume: 48 , Issue: 9 , Sept. 2000  
Pages: 2628 - 2640

[Abstract]    [PDF Full-Text (344 KB)]    IEEE JNL



**3 A three-layer, two description image coder**  
 Ware, F.W.; Gibson, J.D.;  
 Data Compression Conference, 2000. Proceedings. DCC 2000 , 28-30 March 2000  
 Pages: 577

[Abstract] [PDF Full-Text (56 KB)] IEEE CNF

**4 On error-rate characteristics of oversampled A/D conversion**  
 Cvetkovic, Z.; Vetterli, M.;  
 Circuits and Systems, 1997. ISCAS '97., Proceedings of 1997 IEEE International  
 Symposium on , Volume: 1 , 9-12 June 1997  
 Pages: 437 - 440 vol. 1

[Abstract] [PDF Full-Text (364 KB)] IEEE CNF

**5 Quantization noise feedback in Laplacian pyramid-based image coding: a rate-distortion approach**  
 Alparone, L.;  
 Digital Signal Processing Proceedings, 1997. DSP 97., 1997 13th International  
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 Pages: 849 - 852 vol. 2

[Abstract] [PDF Full-Text (368 KB)] IEEE CNF

**6 Optimum feedback quantizers for Laplacian pyramids**  
 Aiazzi, B.; Alparone, L.; Baronti, S.; Lotti, F.;  
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**7 Almost uniformity of quantization errors**  
 Kushner, H.B.; Meisner, M.; Levy, A.V.;  
 Instrumentation and Measurement, IEEE Transactions on , Volume: 40 , Issue:  
 4 , Aug. 1991  
 Pages: 682 - 687

[Abstract] [PDF Full-Text (336 KB)] IEEE JNL

**8 Analysis of roughly quantized Gaussian signals***Chiorboli, G.; Fontanili, M.;*

Instrumentation and Measurement Technology Conference, 1999. IMTC/99.

Proceedings of the 16th IEEE , Volume: 2 , 24-26 May 1999

Pages: 1167 - 1171 vol.2

[\[Abstract\]](#) [\[PDF Full-Text \(276 KB\)\]](#) **IEEE CNF****9 Dithered ADC systems in the presence of hysteresis errors***Pereira, J.M.D.; Serra, A.C.; Girao, P.S.;*

Instrumentation and Measurement Technology Conference, 1999. IMTC/99.

Proceedings of the 16th IEEE , Volume: 3 , 24-26 May 1999

Pages: 1648 - 1652 vol.3

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Relevance scale ☐ ☐ ☐ ☐ ☐**1 Adaptive colormap selection algorithm for motion sequences**

J. Furlani, L. McMillan, L. Westover

October 1994 **Proceedings of the second ACM international conference on Multimedia**Full text available:  [pdf\(740.72 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We present a simple and intuitive algorithm for the quantization of full-color images which has been designed to apply to static images and motion sequences equally well. Our technique eliminates the perils of hardware colormap flashing which is inherent in other well known algorithms for selecting colormap representatives. We compare our technique with existing static image colormap generation techniques to show the quality of the resultant quantization.

**2 Session 2: High-pass quantization for mesh encoding**

Olga Sorkine, Daniel Cohen-Or, Sivan Toledo

June 2003 **Proceedings of the Eurographics/ACM SIGGRAPH symposium on Geometry processing**Full text available:  [pdf\(9.58 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Any quantization introduces errors. An important question is how to suppress their visual effect. In this paper we present a new quantization method for the geometry of 3D meshes, which enables aggressive quantization without significant loss of visual quality. Conventionally, quantization is applied directly to the 3-space coordinates. This form of quantization introduces high-frequency errors into the model. Since high-frequency errors modify the appearance of the surface, they are highly noticeable ...

**3 Progressive geometry compression**

Andrei Khodakovsky, Peter Schröder, Wim Sweldens

July 2000 **Proceedings of the 27th annual conference on Computer graphics and interactive techniques**Full text available:  [pdf\(7.41 MB\)](#) Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)


We propose a new progressive compression scheme for arbitrary topology, highly detailed and densely sampled meshes arising from geometry scanning. We observe that meshes consist of three distinct components: geometry, parameter, and connectivity information. The latter two do not contribute to the reduction of error in a compression setting. Using semi-regular meshes, parameter and connectivity information can be virtually eliminated. Coupled with semi-regular wavelet transforms, zerotree c ...

**Keywords:** compression algorithms, hierarchical representations, semi-regular meshes, signal processing, subdivision surfaces, wavelets, zerotree coding

4 Comparative analysis of the quantization of color spaces on the basis of the CIELAB color-difference formula

B. Hill, Th. Roger, F. W. Vorhagen

April 1997 **ACM Transactions on Graphics (TOG)**, Volume 16 Issue 2

Full text available:  [pdf\(5.16 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

This article discusses the CIELAB color space within the limits of optimal colors including the complete volume of object colors. A graphical representation of this color space is composed of planes of constant lightness  $L^*$  with an net of lines parallel to the  $a^*$  and  $b^*$  axes. This uniform net is projected onto a number of other color spaces (CIE XYZ, tristimulus RGB, predistorted RGB, and YCC color space) to demonstrate and study the structure ...

**Keywords:** CIE XYZ, CIELAB, CIELAB color space, CIELUV, Chromaticity, YCC, color difference perception, color quantization, color spaces, dye sublimation printer, match print, optimal colors

5 Special issue on independent components analysis: ICA for watermarking digital images

Stéphane Bounkong, Borémi Toch, David Saad, David Lowe

December 2003 **The Journal of Machine Learning Research**, Volume 4

Full text available:  [pdf\(554.76 KB\)](#)


Additional Information: [full citation](#), [abstract](#), [index terms](#)

We present a domain-independent ICA-based approach to watermarking. This approach can be used on images, music or video to embed either a robust or fragile watermark. In the case of robust watermarking, the method shows high information rate and robustness against malicious and non-malicious attacks, while keeping a low induced distortion. The fragile watermarking scheme, on the other hand, shows high sensitivity to tampering attempts while keeping the requirement for high information rate and low ...

6 A survey of methods for recovering quadrics in triangle meshes

Sylvain Petitjean

June 2002 **ACM Computing Surveys (CSUR)**, Volume 34 Issue 2

Full text available:  [pdf\(3.91 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In a variety of practical situations such as reverse engineering of boundary representation from depth maps of scanned objects, range data analysis, model-based recognition and algebraic surface design, there is a need to recover the shape of visible surfaces of a dense 3D point set. In particular, it is desirable to identify and fit simple surfaces of known type wherever these are in reasonable agreement with the data. We are interested in the class of quadric surfaces, that is, algebraic surfaces ...

**Keywords:** Data fitting, geometry enhancement, local geometry estimation, mesh fairing, shape recovery

7 Session 2: Geometry compression of normal meshes using rate-distortion algorithms


Sridhar Lavu, Hyeokho Choi, Richard Baraniuk

June 2003 **Proceedings of the Eurographics/ACM SIGGRAPH symposium on Geometry**

**processing**


Full text available:  pdf(285.71 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We propose a new rate-distortion based algorithm for compressing 3D surface geometry represented using triangular *normal meshes*. We apply the Estimation-Quantization (EQ) algorithm to compress normal mesh wavelet coefficients. The EQ algorithm models the wavelet coefficients as a Gaussian random field with slowly varying standard deviation that depends on the local neighborhood and uses rate-distortion optimal scalar quantizers. We achieve gains of 0.5 to 1 dB with the EQ algorithm compar ...



- 8 [Rate shaping by block dropping for transmission of MPEG-precoded video over channels of dynamic bandwidth](#)   
Wenjun Zeng, Bede Liu  
February 1997 **Proceedings of the fourth ACM international conference on Multimedia**

Full text available:  pdf(1.30 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

**Keywords:** block dropping, directional interpolation, quality of service, rate shaping, video compression, video on demand, wireless transmission


- 9 [Wavelet-based multiresolutional representation of computational field simulation datasets](#) 


Zhifan Zhu, Raghu Machiraju, Bryan Fry, Robert Moorhead  
October 1997 **Proceedings of the 8th conference on Visualization '97**

Full text available:  pdf(1.26 MB)  Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)  
[Publisher Site](#)


**Keywords:** human visual system, progressive transmission, structure detection, wavelet transform

- 10 [Fraud detection and self embedding](#)   
Tse-Hua Lan, Ahmed H. Tewfik  
October 1999 **Proceedings of the seventh ACM international conference on Multimedia (Part 2)**

Full text available:  pdf(566.53 KB) Additional Information: [full citation](#), [references](#), [index terms](#)

- 11 [Vector quantization for volume rendering](#)   
Paul Ning, Lambertus Hesselink  
December 1992 **Proceedings of the 1992 workshop on Volume visualization**

Full text available:  pdf(866.73 KB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

- 12 [Lodestar: an octree-based level of detail generator for VRML](#)   
Dieter Schmalstieg  
February 1997 **Proceedings of the second symposium on Virtual reality modeling language**

Full text available:  pdf(758.76 KB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)